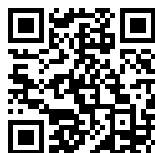

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THE WORKS OF ARISTOTLE

TRANSLATED INTO ENGLISH
UNDER THE EDITORSHIP

OF

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OXFORD
AT THE CLARENDON PRESS

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LONDON, EDINBURGH
NEW YORK AND TORONTO

PREFACE

IT was the desire of the late Master of Balliol, Dr. Benjamin Jowett, as formulated in his will, that the proceeds from the sale of his works, the copyright in which he bequeathed to Balliol College, should be used to promote the study of Greek Literature, especially by the publication of new translations and editions of Greek authors. In a codicil to his will he expressed the hope that the translation of Aristotle's works begun by his own translation of the *Politics* should be proceeded with as speedily as possible. The College resolved that the funds thus accruing to them should, in memory of his services to the College and to Greek letters, be applied to the subvention of a series of translations of the works of Aristotle. Through the co-operation, financial and other, of the Delegates of the University Press it has now become possible to begin the realization of this design. By agreement between the College and the Delegates of the Press the present editors were appointed to superintend the carrying out of the scheme. The series, of which the first instalment is now brought before the public, is published at the joint expense and risk of the College and the Delegates of the Press.

The editors have secured the co-operation of various scholars in the task of translation. The translations make no claim to finality, but aim at being such as a scholar might construct in preparation for a critical edition and commentary. The translation will not presuppose any critical reconstitution of the text. Wherever new readings are proposed the fact will be indicated, but notes justificatory of conjectural emendations or defensive of novel interpretations will, where

PREFACE

admitted, be reduced to the smallest compass. The editors, while retaining a general right of revision and annotation, will leave the responsibility for each translation to its author, whose name will in all cases be given.

Translators have been found for the *Organon*, *Physics*, *De Caelo*, *De Anima*, *Historia Animalium*, *De Animalium Generatione*, *De Insecabilibus Lineis*, *Metaphysics*, *Eudemian Ethics*, *Rhetoric*, and *Poetics*, and it is hoped that the series may in course of time include translations of all the extant works of Aristotle. The editors would be glad to hear of scholars who are willing to undertake the translation of such treatises as have not already been provided for, and invite communications to this end.

The editors desire to acknowledge their obligation to Mr. Charles Cannan for valuable aid in the revision of the present volume, and to Mr. G. R. T. Ross for the preparation of the Index.

J. A. S.
W. D. R.

December, 1907.

THE PARVA NATURALIA

DE SENSU ET SENSIBILI
DE MEMORIA ET REMINISCENTIA
DE SOMNO DE SOMNIIS
DE DIVINATIONE PER SOMNUM

BY

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DE IUVENTUTE ET SENECTUTE
DE VITA ET MORTE DE RESPIRATIONE

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OXFORD
AT THE CLARENDON PRESS

1908

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LONDON, EDINBURGH
NEW YORK AND TORONTO

CHAPTER I

WITH regard to sleep and waking, we must consider what they are; whether they are peculiar to soul or to body, or common to both; and if common, to what part of soul or body they appertain: further, from what cause it arises
15 that they are attributes of animals, and whether all animals share in them both, or some partake of the one only, others of the other only, or some partake of neither and some of both.

Further, in addition to these questions, we must also inquire what the dream is, and from what cause sleepers sometimes dream, and sometimes do not; or whether the truth is that sleepers always dream but do not always
20 remember (their dream); and if this occurs, what its explanation is.

Again, [we must inquire] whether it is possible or not to foresee the future (in dreams), and if it be possible, in what manner; further, whether, supposing it possible, it extends only to things to be accomplished by the agency of Man, or to those also of which the cause lies in supra-human agency, and which result from the workings of Nature, or of Spontaneity.

25 First, then, this much is clear, that waking and sleep appertain to the same part of an animal, inasmuch as they are opposites, and sleep is evidently a privation of waking. For contraries, in natural as well as in all other matters, are seen always to present themselves in the same subject, and to be affections of the same: examples are—health
30 and sickness, beauty and ugliness, strength and weakness, sight and blindness, hearing and deafness. This is also clear
454 a from the following considerations. The criterion by which we know the waking person to be awake is identical with that by which we know the sleeper to be asleep; for we assume that one who is exercising sense-perception is awake,

and that every one who is awake perceives either some external movement or else some movement in his own consciousness. If waking, then, consists in nothing else than ⁵ the exercise of sense-perception, the inference is clear, that the organ, in virtue of which animals perceive, is that by which they wake, when they are awake, or sleep, when they are asleep.

But since ¹ the exercise of sense-perception ² does not belong to soul or body exclusively, then (since the subject of actuality is in every case identical with that of potentiality, and what is called sense-perception, as actuality, is a movement of the soul through the body) it is clear that its ³ affection ⁴ is not an affection of soul exclusively, and that ¹⁰ a soulless body has not the potentiality ⁵ of perception ⁶. [Thus sleep and waking are not attributes of pure intelligence, on the one hand, or of inanimate bodies, on the other.]

Now, whereas we have already elsewhere distinguished what are called the parts of the soul, and whereas the nutrient is, in all living bodies, capable of existing without the other parts, while none of the others can exist without the nutrient; it is clear that ⁷ sleep and waking are not affections of such living ¹⁵ things as partake only of growth and decay, e.g. not of plants, because these have not the faculty of sense-perception,

¹ Since waking is not peculiar to soul or body, neither is sleeping; for sleeping is the potentiality of waking, and if the actuality cannot be peculiar to body or to soul, neither can the potentiality be so. Sleep is an affection (*πάθος*) which renders 'potential' the *αἴσθησις*, whose actuality is waking. But instead of concluding 'neither is the *πάθος* peculiar to soul or body', or 'neither is the affection peculiar to soul, nor can a body without soul sleep', he winds up with the conclusion: 'nor is a body without soul *capable of sense-perception*'; which involves the other point; and is really what he aims at. For to be capable of *αἰσθάνεσθαι*, without being actually *αἰσθανόμενος*, is to be asleep: to be incapable of it is to be incapable of sleeping as well as of waking. The nerve of the reasoning is contained in the parenthesis.

² i. e. in the form of *ἐργήγορις*.

³ Sc. that of *αἴσθησις*.

⁴ Sc. *ὑπνος*; see 453^b 28, 29.

⁵ Cf. 454^b 11-12, where also what is capable of sleeping is virtually identified with *τὸ δυνατόν αἰσθάνεσθαι κατ' ἐνέργ. αἰσθανόμενον*.

⁶ Sc. cannot sleep: Sleep, the *πάθος*, as the parenthesis shows, is here regarded as *δύναμις*, waking as *ἐνέργεια*, of *αἴσθησις*. Vide *de An.* II. i. 412^a 23-26.

⁷ The clauses preceding *δὴλον ὅτι* are only the preamble, not the reason, of what follows. For *ὥς . . . ὅτι* cf. 443ⁿ 23, 24.

whether or not this be capable of separate¹ existence ; in its potentiality, indeed, and in its relationships, it *is* separable [sc. from τὸ θρεπτικόν].

Likewise it is clear that [of those which either sleep or wake] there is no animal which is always awake or always asleep, but that both these affections belong [alternately] to the same animals.² For if there be an animal not endued with sense-perception, it is impossible that this should either³ sleep or wake ; since both these are affections

¹ Capable of existing separately from τὸ θρεπτικόν and the vegetative functions. With τῷ εἶναι cf. 448^a 20 (note), where τῷ λόγῳ explains it. Nowhere in the world can Aristotle find τὸ αἰσθητικόν apart from τὸ θρεπτικόν. He cannot say that it is χωριστὸν ἀπλῶς, or χωριστὸν τόπῳ, or μεγέθει, yet it is separate τῷ εἶναι, i.e. in its relationship to objects. It is separate also τῇ δυνάμει. This difference may be expressed by saying that τὸ θρεπτικόν is a δύναμις θρεπτική, τὸ αἰσθητικόν a δύναμις αἰσθητική. τῇ δυνάμει therefore = 'in respect of its potentiality as part of soul', or briefly 'as a faculty'.

² τοῖς αὐτοῖς τῶν ζῴων = 'the same animals', as in 450^a 15 ἐτέροις τῶν ζ. = 'different animals'.

³ The difficulty of this whole passage becomes acute here. The traditional translation involves a misuse of οὔτε before the infinitive. The grammatical version would be — 'it cannot either sleep or wake,' οὔτε . . . οὔτε explicating οὐ. As the text stands this would make no sense. Inserting μή before ἔχον we could restore sense and grammar. This has been assumed in the translation. It is to be observed that the μὲν after ὅσα in ^a 15 has no answering δέ. But Aristotle would naturally have gone on from 'plants' to the case of animals which stood on the border line. Having said that φυτόν (which have not the organ of sense-perception) cannot sleep or wake, he would naturally say that if there be any animal which has not perception it too cannot sleep or wake. In 778^b 23-779^a 10 he considers such animals, viz. ἔμβρυα, which (he there says) do not sleep but do something like it, 'just like plants.' In *Pol.* 1335^b 24, too, he refers to these before the stage of αἴσθησις, before which stage ἐμποιεῖσθαι δέ τὴν ἀμβλωσιν. In another respect the received translation is wrong, for εἴ τί ἐστι ζῶν ἔχον αἴσθησιν does not really = 'if an animal is, &c.', but 'if there be any animal having αἴσθησις': the former would be represented rather by εἰ ἐστι ζῶν τὸ ἔχον αἴσθησιν. Thus, too, γάρ ^a 21 first gets any meaning, by making it refer to οὐ γὰρ . . . ἔχουσι in ^a 17. Then, however, it appears that ὁμοίως . . . ταῦτα ^a 19-21 is out of its place. If, however, we transfer this to ^a 24 after αἰσθητικοῦ we find the next words tautological. So that there is something almost certainly wrong with the text. I believe the insertion of μή to be required absolutely by the grammar, and critically justifiable by the consideration that it would have easily been lost owing to the appearance it has of contradicting Aristotle's well-known definition of ζῶν. At least its insertion has as good critical ground to stand upon as that of μή in 449^a 3 (μή) αἰσθάνεται. The general sense of ^a 21-26 (οὐ γὰρ . . . ἐργηγορέναι) is — 'For while without sensation no creature can do either, with sensation every creature must do both.'

An explanation of the passage from ^a 19 to ^a 32 communicated by Mr. Charles Cannan seems so valuable, based as it is on minute and

of the activity of the primary faculty of sense-perception. But it is equally impossible also that either of these two affections should perpetually attach itself to the same animal, e.g. that some species of animal should be always asleep or always 25 awake, without intermission; for all organs which have a natural function must lose power when they work beyond the natural time-limit of their working period; for instance, the eyes [must lose power] from [too-long continued] seeing, and must give it up; and so it is with the hand and every other member which has a function. Now, if sense-perception is the 30 function of a special organ, this also, if it continues perceiving beyond the appointed time-limit of its continuous working period, will lose its power, and will do its work no longer. Accordingly, if the waking period is determined by this fact, that in it sense-perception is free; if in the case of some 454 b contraries one of the two must be present, while in the case of others this is not necessary¹; if waking is the contrary of sleeping, and one of these two must be present to every animal: it must follow that the state of sleeping is necessary. Finally, if such affection is Sleep, and this is a state of powerlessness arising from excess of waking, and excess of waking is in its 5

scholarly analysis of the sense and grammar, that his permission to print it has been gladly accepted. Mr. Cannan suggests that in * 21 we should read *οὐ γὰρ εἴ τί ἐστι ζῶον*, or *ζῶον (μόριον)*, and explains * 19-32 as follows: 'But it is equally plain that there is nothing which has one of the two always, but both affections belong to the same *parts* and *kinds* of animals [*animals*, for plants are excluded above]. For [(a) as to *parts*] it does not follow that, if some part of an animal has sense-perception, it—the mere part—has the faculty either of sleeping or of waking; for both these affections are incident, not to a single organ, but to the primary faculty of sense-perception [for example, the heart is not always asleep and the brain always awake (cf. Michael, p. 44. 13; Arist. 453^b 13), for in the proper sense they do not sleep or wake at all]; nor [(b) as to *kinds*], on the other hand, can either sleeping or waking attach itself for ever, to the exclusion of the other, to the same thing, in the sense that some particular kind of animal [e.g. the weasel] is always awake, and some other [e.g. the dormouse] is always asleep. For (δρι) all things having a natural *ἔργον* become incapable in time of that *ἔργον*; therefore, that of which *τὸ αἰσθάνεσθαι* is an *ἔργον* will become incapable of *τὸ αἰσθάνεσθαι*, and leave a blank which must be filled up with sleep, its contrary.'

¹ Read in 454^b I with EMY *τῶν δ' ἐναντίων τῶν μὲν ἀνάγκη θάτερον δεῖ παρῆναι, τῶν δ' οὐκ*. There are certain pairs of contraries (e.g. *κακία* and *ἀρετή*, cf. 1145^a 25) one of which is not always predicable of living animals; while there are others of which one must be always present, and to this class belong sleep and waking.

origin sometimes morbid, sometimes not, so that the powerlessness or dissolution of activity will be so or not; it is inevitable that every creature which wakes must also be capable of sleeping, since it is impossible that it should continue actualizing its powers perpetually.

So, also, it is impossible for any animal to continue always sleeping. For sleep is an affection of the organ¹ of sense-perception—a sort of tie or inhibition of function imposed on it, so that every creature that sleeps must needs have the organ of sense-perception. Now, that alone which is capable of sense-perception in actuality has the faculty of sense-perception; but to realize this faculty, in the proper and unqualified sense, is impossible while one is asleep. All sleep, therefore, must be susceptible of awakening. Accordingly, almost all other animals are clearly observed to partake in sleep, whether they are aquatic, aerial, or terrestrial, since fishes of all kinds, and molluscs, as well as all others which have eyes, have been seen sleeping. ‘Hard-eyed’ creatures and insects manifestly assume the posture² of sleep; but the sleep of all such creatures is of brief duration, so that often it might well baffle one’s observation to decide whether they sleep³ or not. Of testaceous animals, on the contrary, no direct sensible evidence is as yet forthcoming to determine whether they sleep, but if the above reasoning be convincing to any one, he who follows it will admit this⁴ [viz. that they do so].

That, therefore, all animals sleep may be gathered from these considerations. For an animal is defined as such by its possessing sense-perception; and we assert that sleep is, in a certain way, an inhibition of function, or, as it were, a tie, imposed on sense-perception, while its loosening or remission constitutes the being awake. But no plant can partake in either of these affections, for without sense-perception there

¹ What affects the *organ*, affects the *faculty*, and there is no need to press the distinction here.

² If we cannot see that they are asleep, we can see them ‘couching’. The notion of *κοίτη* in *κοιμώμενα* is important; the allusion to it contains the point here.

³ *μετέχουσι τοῦ καθεύδειν, not = καθεύδουσι*. The point is that mere observation cannot decide the general question: but with the *a priori* argument (*ὁ λεχθεὶς λόγος*) it helps to convince.

⁴ [Read *τοῦτο* for *τούτω*, with Bywater, *J. P.* xxviii. 243. Edd.]

is neither sleeping nor waking. But creatures which have sense-perception have likewise the feeling of pain and pleasure, while those which have these have appetite as well; but plants have none of these affections. A mark of this¹ is that the nutrient part does its own work better when (the animal) is asleep than when it is awake. Nutrition and growth are then especially promoted, a fact which implies that creatures do not need sense-perception to assist these processes.

CHAPTER II

We must now proceed to inquire into the cause why one sleeps and wakes, and into the particular nature of the sense-perception, or sense-perceptions, if there be several, on which these affections depend. Since, then, some animals possess all the modes of sense-perception, and some not all, not, for example, sight, while all possess touch and taste, except such animals as are imperfectly developed, a class of which we have already treated in our work on the soul; and since an animal when asleep is unable to exercise, in the simple sense, any particular² sensory faculty whatever, it follows that in the state called sleep the same affection must extend to all³ the special senses; because, if it attaches itself to one of them but not to another, then an animal while asleep may perceive with the latter; but this is impossible.

Now, since every sense has something peculiar, and also something common; peculiar, as, e.g., seeing is to the sense of sight, hearing to the auditory sense, and so on with the other senses severally; while all are accompanied by a common power, in virtue whereof a person perceives *that* he sees or hears (for, assuredly, it is not by the special⁴ sense of sight that one sees that he sees; and it is not by mere taste, or

¹ Separableness of the nutrient from the sentient faculty.

² Sleep is an affection of the general faculty τὸ αἰσθητικὸν πάντων, which does not preclude such exercise of this as takes place in dreaming.

³ The text is exceedingly doubtful: cf. ^a 25 *infra* (where the conclusion of the matter is given) διὸ καὶ πᾶσι ὑπάρχει τοῖς ζώοις, and also the words εἰ γὰρ τῷ πάσας τι πεπονθέναι ^a 27-8.

⁴ But by the 'general' sense, *qua* related to the 'special'.

sight, or both together that one discerns, and has the faculty of discerning, that sweet things are different from white things, but by a faculty connected in common with all the organs of
 20 sense; for there is one sensory function, and the controlling sensory faculty is one, though differing as a faculty of perception¹ in relation to each genus of sensibles, e. g., sound or colour); and since this [common sensory activity] subsists in association chiefly with the faculty of touch (for this [touch] can exist apart from all the other organs of sense, but none of them can exist apart from it—a subject of which we
 25 have treated in our speculations concerning the Soul); it is therefore evident that waking and sleeping are an affection of this [common and controlling organ of sense-perception]. This explains why they belong to all animals, for touch [with which this common organ is chiefly connected], alone, [is common] to all [animals].

For if sleeping were caused by the *special* senses having each and all undergone some affection, it would be strange that these senses, for which it is neither necessary nor in a manner possible to realize their powers simultaneously,
 30 should necessarily all go idle and become motionless simultaneously. For the contrary experience, viz. that they should not go to rest altogether, would have been more reasonably anticipated. But, according to the explanation just given, all is quite clear regarding those also. For, when the sense organ which controls all the others, and to which all the others are tributary, has been in some way affected,
 455 b that these others should be all affected at the same time is inevitable, whereas, if one of the tributaries becomes powerless, that the controlling organ should also become powerless need in no wise follow.

It is indeed evident from many considerations that sleep does not consist in the mere fact that the special senses do not function or that one does not employ them; and that it does not consist merely in an inability to exercise the
 5 sense-perceptions; for such is what happens in cases of swooning. A swoon means just such impotence of percep-

¹ τὸ δ' εἶναι αἰσθῆσαι ἕτερον. Cf. 459^a 16 τὸ δ' εἶναι φανταστικῶς. αἰσθῆσαι governs τοῦ γένους. Cf. 449^a 18 (note).

tion, and certain other cases of unconsciousness also are of this nature. Moreover, persons who have the blood-vessels in the neck compressed become insensible. But sleep supervenes when such incapacity of exercise has neither arisen in some casual organ of sense, nor from some chance cause, but when, as has been just stated, it has its seat in the ¹⁰ primary organ with which one perceives objects in general.¹ For when this has become powerless all the other sensory organs also must lack power to perceive; but when one of them has become powerless, it is not necessary for this also to lose its power.

We must next state the cause to which it is due, and its quality as an affection. Now, since there are several types of cause (for we assign equally the 'final', the 'efficient', ¹⁵ the 'material', and the 'formal' as causes), in the first place, then, as we assert that Nature operates for the sake of an end, and that this end is a *good*²; and that to every creature which is endowed by nature with the power to move, but cannot with pleasure³ to itself move always and continuously, rest is necessary and beneficial; and since, taught by experi- ²⁰ ence, men apply to sleep this metaphorical⁴ term, calling it a 'rest' [from the strain of movement implied in sense-perception]: we conclude that its end is the conservation of animals. But the waking state is for an animal its highest end, since the exercise of sense-perception or of thought is the highest end for all beings to which either of these appertains; inasmuch as these are best, and the highest end is what is best: whence it follows that sleep belongs of necessity to ²⁵ each animal. I use the term 'necessity' in its conditional sense, meaning that if an animal is to exist and have its own proper nature, it must have certain endowments; and, if these

¹ See 449^a 17 τὸ αἰσθητικὸν πάντων.

² ἀνάπαυσις is an end, i.e. a good; but *the* end, i.e. the highest end, of animal life is τὸ αἶσθ. καὶ τὸ φρονεῖν, to which ὕπνος is subordinated. Cf. *infra* ^a 23-25. The ἀγαθόν τι is distinguished from τὸ τέλος.

³ Anaxagoras held that all αἴσθησις is μετὰ λύπης. Theophr. *de Sens.* § 29. Cf. also Aristotle, *N. E.* 1154^b 7 αἰὲ γὰρ ποιεῖ τὸ ζῶον ὥσπερ καὶ οἱ φυσιολόγοι μαρτυροῦσι, τὸ ὁρᾶν, τὸ ἀκούειν φάσκοντες εἶναι λυπηρόν.

⁴ The metaphor is plain enough in the Greek word ἀνάπαυσις. No word in English seems to meet the case so well as 'rest'. EM give καταφθῆραν, which, however, it would be difficult to translate here. But cf. καταφέρεται, 456^b 24.

are to belong to it, certain others likewise must belong to it [as their condition].

The next question to be discussed is that of the kind of movement or action, taking place within their bodies, from
 30 which the affection of waking or sleeping arises in animals. Now, we must assume that the causes of this affection in all other animals are identical with, or analogous to, those which operate in sanguineous animals ; and that the causes operating in sanguineous animals generally are identical with those operating in man. Hence we must consider the entire subject in the light of these instances [afforded by sanguineous
 456 a animals, especially man]. Now, it has been definitely settled already in another work that sense-perception in animals originates in the same part of the organism in which movement originates. This locus of origination is one of three determinate loci, viz. that which lies midway between the head and the abdomen. This in sanguineous animals is the region of the heart ; for all sanguineous animals have
 5 a heart ; and from this it is that both motion and the controlling sense-perception originate. Now, as regards movement, it is obvious that that of breathing and of the cooling process generally takes its rise there ; and it is with a view to the conservation of the [due amount of] heat in this part that nature has formed as she has both the animals which respire, and those which cool themselves by moisture. Of this
 10 [cooling process] *per se* we shall treat hereafter. In bloodless animals, and insects, and such as do not respire, the 'con-natural spirit' ¹ is seen alternately puffed up and subsiding in the part which is in them analogous [to the region of the heart in sanguineous animals]. This is clearly observable in the holoptera [insects with undivided wings] as wasps and bees ; also in flies and such creatures. And since to move
 15 anything, or do anything, is impossible without strength, and holding the breath produces strength—in creatures which inhale, the holding of that breath ² which comes from without,

¹ τὸ σύμφυτον πνεῦμα, i.e. the πνεῦμα which is naturally inherent, as opposed to that inhaled (τὸ θύραθεν ἐπείσακτον).

² ἡ θύραθεν is short for ἡ τοῦ θύραθεν πνεύματος κάθεξις, as ἡ σύμφυτος also = ἡ τοῦ συμφύτου πνεύματος κάθεξις.

but, in creatures which do not respire, of that which is con-
 natural (which explains why winged insects of the class
 holoptera, when they move, are perceived to make a hum-
 ming noise, due to the friction of the connatural spirit collid-
 ing with the diaphragm); and since movement¹ is, in every²⁰
 animal, attended² with some sense-perception, either internal
 or external³, in the primary organ of sense, [we conclude]
 accordingly that if sleeping and waking are affections of this
 organ, the place in which, or the organ in which, sleep and
 waking originate, is self-evident [being that in which move-²⁵
 ment and sense-perception originate, viz. the heart].

Some persons move in their sleep, and perform many acts
 like waking acts, but not without a phantasm or an exercise
 of sense-perception; for a dream is in a certain way a sense-
 impression. But of them we have to speak later on. Why
 it is that persons when aroused remember their dreams, but
 do not remember these acts which are like waking acts, has
 been already explained in the work 'Of Problems'.

CHAPTER III

The point for consideration next in order to the preceding³⁰
 is:—What are the processes in which the affection of waking
 and sleeping originates, and whence do they arise? Now,
 since it is when it has sense-perception that an animal must
 first *take*⁴ food and receive growth, and in all cases food in its
 ultimate form is, in sanguineous animals, the natural sub-³⁵
 stance blood, or, in bloodless animals, that which is analogous
 to this; and since the veins are the place of the blood, while^{456 b}
 the origin of these is the heart—an assertion which is proved
 by anatomy—it is manifest that, when the external nutriment

¹ κινείται . . . αἰσθητηρίῳ. Aristotle does not mean that whenever one
 has an αἴσθησις he moves (or is moved) locally. The κινείται here and
 the κινεῖν^a 15 refer to *local* movement, involving output of bodily energy,
 not to the κίνησις (or stimulation) of sense.

² ^a 20 If instead of γινομένης (^a 20) γενομένης were read, the movement
 should be regarded as *prompted* by the perception—a very important
 difference.

³ οἰκείας ἢ ἀλλοτρίας: arising either from an intra-organic or an extra-
 organic stimulus.

⁴ i.e. *qua* animal; before this, in the embryonic stage, it grows and is
 nourished like a vegetable.

enters the parts fitted for its reception, the evaporation arising from it enters into the veins, and there, undergoing a change, 5 is converted into blood, and makes its way to their source [the heart]. We have treated of all this when discussing the subject of nutrition, but must here recapitulate what was there said, in order that we may obtain a scientific view of the beginnings of the process, and come to know what exactly happens to the primary organ of sense-perception to account for the occurrence of waking and sleep. For sleep, as has 10 been shown, is not any given impotence of the perceptive faculty ; for unconsciousness, a certain form of asphyxia, and swooning, all produce such impotence. Moreover it is an established fact that some persons in a profound trance have still had the imaginative faculty in play. This last point, indeed, gives rise to a difficulty ; for if it is conceivable that one who had swooned should in this state fall asleep, the phantasm also which then presented itself to his mind might be regarded as a dream. 15 Persons, too, who have fallen into a deep trance, and have come to be regarded as dead, say many things while in this condition. The same view, however, is to be taken of all these cases, [i. e. that they are not cases of sleeping or dreaming].

As we observed above, sleep is not co-extensive with any and every impotence of the perceptive faculty, but this affection is one which arises from the evaporation attendant upon the 20 process of nutrition. The matter evaporated must be driven onwards to a certain point, then turn back, and change its current to and fro, like a tide-race in a narrow strait. Now, in every animal the hot naturally tends to move [and carry other things] upwards, but when it has reached the parts above, [becoming cool, see 457^b 30] it turns back again, and moves downwards in a mass. This explains why fits of drowsiness are especially apt to come on after meals ; for the matter, both the 25 liquid and the corporeal, which is borne upwards in a mass, is then of considerable quantity. When, therefore, this comes to a stand it weighs a person down and causes him to nod, but when it has actually sunk downwards, and by its return has repulsed the hot, sleep comes on, and the animal so affected is presently asleep. A confirmation of this appears from consider-

ing the things which induce sleep ; they all, whether potable ³⁰ or edible, for instance poppy, mandragora, wine, darnel, produce a heaviness in the head ; and persons borne down [by sleepiness] and nodding [drowsily] all seem affected in this way, i. e. they are unable to lift up the head or the eye-lids. And it is after meals especially that sleep comes on like this, for the evaporation from the foods eaten is then copious. It also follows certain forms of fatigue ; for fatigue operates as a solvent, and the dissolved matter acts, if not cold, like food ³⁵ prior to digestion. Moreover, some kinds of illness have ^{457 a} this same effect ; those arising from moist and hot secretions, as happens with fever-patients and in cases of lethargy.¹ Extreme youth also has this effect ; infants, for example, sleep a great deal, because of the food being all borne upwards —a mark whereof appears in the disproportionately large size ⁵ of the upper parts compared with the lower during infancy, which is due to the fact that growth predominates in the direction of the former. Hence also they are subject to epileptic² seizures ; for sleep is like epilepsy, and, in a sense, actually is a seizure of this sort. Accordingly, the beginning ¹⁰ of this malady takes place with many during sleep, and their subsequent habitual seizures occur in sleep, not in waking hours. For when the spirit [evaporation] moves upwards in a volume, on its return downwards it distends the veins, and forcibly compresses the passage through which respiration is effected. This explains why wines are not good for infants or for wet nurses (for it makes no difference, doubtless, ¹⁵ whether the infants themselves, or their nurses, drink them), but such persons should drink them [if at all] diluted with water and in small quantity. For wine is spirituous, and of all wines the dark more so than any other. The upper parts, in infants, are so filled with nutriment that within five months [after birth] they do not even turn the neck [sc. to raise the head] ; for in them, as in persons deeply intoxicated, there is ever a large quantity of moisture ascending. It is reasonable, ²⁰

¹ If *ἐν* be right, *λήθαργος* may be either a substantive or an adjective in agreement with *πυρετοῖς* understood.

² Not merely childish fits and convulsions, but *epileptic* fits. The word in this sense is as old as Hippocrates, and the facts here stated are all medical truths.

too, to think that this affection is the cause of the embryo's remaining at rest in the womb at first. Also, as a general rule, persons whose veins are inconspicuous, as well as those who are dwarf-like, or have abnormally large heads, are addicted to sleep. For in the former the veins are narrow, so that it is not easy for the moisture to flow down through them; while in the case of dwarfs and those whose heads are ab-
 25 normally large, the impetus of the evaporation upwards is excessive. Those [on the contrary] whose veins are large are, thanks to the easy flow through the veins, not addicted to sleep, unless, indeed, they labour under some other affection which counteracts [this easy flow]. Nor are the 'atrabilious' addicted to sleep, for in them the inward region is cooled so that the quantity of evaporation in their case is not great. For this reason they have large appetites, though
 30 spare and lean; for their bodily condition is as if they derived no benefit from what they eat. The dark bile, too, being itself naturally cold, cools also the nutrient tract, and the other parts wheresoever such secretion [bile] is potentially present [i. e. tends to be formed].

457 b Hence it is plain from what has been said that sleep is a sort of concentration, or natural recoil,¹ of the hot matter inwards [towards its centre], due to the cause above mentioned. Hence restless movement is a marked feature in the case of a person when drowsy. But where it [the heat in the upper and outer parts] begins to fail, he grows cool, and owing to this cooling process his eye-lids droop. Accord-
 5 ingly [in sleep] the upper and outward parts are cool, but

¹ What is meant is otherwise expressed, 458^a 10 *συνεωσμένη κτλ.* *ἀντιπερίστασις* is not here used in its strict sense, in which it involves real 'circulation'. Hence *τις* goes with it as well as with *σύννοδος*. *ἀντιπερίστασις* is defined by Simplicius as a circular process in which 'when a body is pushed out of its place that which has expelled it occupies the place, while that which has been thrust out pushes the adjoining body from its place, until the last moved in this series finds itself in the place of the first, which extruded something else'. It depends on the fact that there is no vacuum. (Cf. 266^a 25 seqq., 459^b 2, 472^b 17; Zeller, *Plato* (E.T.), p. 430; Zeller, *Arist.* i. 515, ii. 378, n.) So Aristotle explained physical facts like the motion of projectiles. Plato, *Tim.* 79 B-E, uses the word *περιωθεῖν* for what A. refers to *ἀντιπερίστασις*. We see the effect of the process when on suddenly opening a door in a room the opposite door shuts, or vice versa. Reference to this explains *τῆς ἀρχῆς* 454^b 2, *γ.ν.*

the inward and lower, i.e. the parts at the feet and in the interior of the body, are hot.

Yet one might find a difficulty on the facts that sleep is most oppressive in its onset after meals, and that wine, and other such things, though they possess heating properties, are productive of sleep,¹ for it is not probable that sleep should be a process of cooling while the things that cause sleeping are themselves hot. Is the explanation of this, then, to be found in the fact that, as the stomach when empty is hot, while replenishment cools it by the movement it occasions, so the passages and tracts in the head are cooled as the 'evaporation' ascends thither? Or, as those who have hot water poured on them feel a sudden shiver of cold, just so in the case before us, may it be that, when the hot substance ascends, the cold rallying to meet it cools [the aforesaid parts], deprives their native heat of all its power, and compels it to retire? Moreover, when much food is taken, which [i.e. the nutrient evaporation from which] the hot substance carries upwards, this latter, like a fire when fresh logs are laid upon it, is itself cooled, until the food has been digested.

For, as has been observed elsewhere,² sleep comes on when the corporeal element [in the 'evaporation'] is conveyed upwards by the hot, along the veins, to the head. But when that which has been thus carried up can no longer ascend, but is too great in quantity³ [to do so], it forces the hot back again and flows downwards. Hence it is that men sink down [as they do in sleep] when the heat which tends to keep them erect (man alone, among animals, being naturally erect) is withdrawn; and this, when it befalls⁴ them, causes unconsciousness, and afterwards⁵ phantasy.

Or are the solutions thus proposed barely conceivable accounts of the refrigeration which takes place, while, as

¹ ^h 9. There should be only a comma after *ταῦτα*. *δέ* here gives the argument from the opponent's point of view, and = 'for'.

² *De Part. An.* ii. 7, 653^a 10.

³ A new factor—*mechanical* pressure—is here introduced.

⁴ *ἐπιπλέον* sc. *τὸ ὑπερπᾶσθαι τὸ θερμὸν*. Bonitz, *Ind.* 267^a 32 makes *τὸ θερμὸν* alone agree with *ἐπιπλέον*, and so Freudenthal translates 'wieder-eindringend erzeugt das Warme Bewusstlosigkeit'. *ἐπιπλέον* expresses a hostile attack, an onset.

⁵ 'Afterwards', i.e. when the process of *δύκμις* sets in; cf. 461^a 25.

a matter of fact, the region of the brain is, as stated elsewhere, the main determinant of the matter? For the brain,
 30 or in creatures without a brain that which corresponds to it, is of all parts of the body the coolest. Therefore, as moisture turned into vapour by the sun's heat is, when it has ascended to the upper regions, cooled by the coldness of the latter, and becoming condensed, is carried downwards, and turned into
 458 a water once more; just so the excrementitious evaporation, when carried up by the heat to the region of the brain, is condensed into a 'phlegm' (which explains why catarrhs are seen to proceed from the head); while that evaporation which is
 5 nutrient and not unwholesome, becoming condensed, descends and cools the hot. The tenuity or narrowness of the veins about the brain itself contributes to its being kept cool, and to its not readily admitting the evaporation. This, then, is a sufficient explanation of the cooling which takes place, despite the fact that the evaporation is exceedingly hot.

10 A person awakes from sleep when digestion is completed: when the heat, which had been previously forced together in large quantity within a small compass from out the surrounding part, has once more prevailed, and when a separation has been effected¹ between the more corporeal and the purer blood.² The finest and purest blood is that contained in the head, while the thickest and most turbid is that in the lower
 15 parts. The source of all the blood is, as has been stated both here and elsewhere, the heart. Now of the chambers in the heart the central communicates with each of the two others. Each of the latter again acts as receiver from each, respectively, of the two vessels,³ called the 'great' and the 'aorta'. It is in the central chamber that the [above-men-
 20 tioned] separation takes place. To go into these matters in detail would, however, be more properly the business of a different treatise from the present. Owing to the fact that the blood formed after the assimilation of food is especially

¹ Sc. in the heart; see below ^a 19.

² Contained in the 'evaporated substance' now collected back into the heart.

³ To use the term 'artery' here in translation would mislead any mere English reader into thinking that Aristotle knew the difference between arteries and veins.

in need of separation, sleep [then especially] occurs [and lasts] until the purest part of this blood has been separated off into the upper parts of the body, and the most turbid into the lower parts. When this has taken place animals awake from sleep, being released from the heaviness consequent on taking food.

We have now stated the *cause*¹ of sleeping, viz., that it²⁵ consists in the recoil by² the corporeal element, upborne by the connatural heat, in a mass upon the primary sense-organ; we have also stated *what*³ sleep is, having shown that it is a seizure of the primary sense-organ, rendering it unable to actualize its powers; arising of necessity (for it is impossible³⁰ for an animal to exist if the conditions which render it an animal be not fulfilled), i. e., for the sake of its conservation⁴; since remission of movement tends to the conservation of animals.

¹ This gives the cause *ὅθεν ἡ κίνησις*, or *efficient* cause: the kinetic energy of τὸ θερμόν. The *material* cause is τὸ ἀναθυμώμενον, and the other material conditions, regarded statically, i. e. in abstraction from their *κίνησις*.

² ἡ . . . ἀντιπερίστασις sc. γιγνομένη. In 458^b I τὸ θερμόν is used for τὸ σωματώδες τὸ ἀναφ. ὑπὸ τοῦ συμφύτου θερμοῦ here. The agency which causes the recoil is the cold of the brain: hence ὑπό * 26 = (not 'caused by', but) 'undergone by'. The ὑπό in this sense is curious, but ἀντιπερίστασις (corresponding to ἀντιπεριστῆναι, not to ἀντιπεριστάναι) is a sort of manœuvre effected by the substance.

³ i. e. its definition or *formal* cause.

⁴ σωτηρία is the *final* cause.

CHAPTER I

WE must, in the next place, investigate the subject of the dream, and first inquire to which of the faculties of the soul it presents itself, i. e. whether the affection is one which pertains to the faculty of intelligence or to that of sense-perception; for these are the only faculties within us by which we acquire knowledge.

If, then, the exercise of the faculty of sight is actual seeing, that of the auditory faculty, hearing, and, in general that of the faculty of sense-perception, perceiving; and if there are
5 some perceptions common to the senses, such as figure, magnitude, motion, &c., while there are others, as colour, sound, taste, peculiar [each to its own sense]; and further, if all creatures, when the eyes are closed in sleep, are unable to see, and the analogous statement is true of the other senses, so that manifestly we perceive nothing¹ when asleep; we may conclude that it is not by sense-perception we perceive a dream.)

But neither is it by opinion that we do so. For [in
10 dreams] we not only assert, e. g., that some object approaching is a man or a horse [which would be an exercise of opinion], but that the object is white or beautiful, points on which opinion without sense-perception asserts nothing

¹ 458^b 8. Read after Christ's conj. *οὐδὲν ἐν*. We do not perceive anything in sleep with the *particular* or *special* senses, but the *πρῶτον αἰσθητικόν* is active in the dream, i. e. we *perceive*, in a way to be explained in these chapters, with the *general* sense as re-presentative faculty. Biehl wrongly marks the apodosis at *ὥστε* ^b8: it really begins at *οὐκ ἄρα γε* ^b9. The *ὥστε* clause states the consequence of the fact contained in the clause commencing *ἀδυνατεῖ δέ*, and therefore belongs to the premisses. 'We cannot by sense perceive either the *κοινά* or the *ἴδια* in sleep, so that we cannot then perceive anything at all; therefore it is not by sense that we perceive a dream (not, that is, by *special* sense, as afterwards to be explained).' Such is the argument.

either truly or falsely. It is, however, a fact that the soul makes such assertions in sleep. We seem to see equally well that the approaching figure is a man, and that it is white. [In dreams], too, we think something else, over and above ¹⁵ the dream presentation, just as we do in waking moments when we perceive something; for we often also reason about that which we perceive. So, too, in sleep we sometimes have thoughts other than the mere phantasms immediately before our minds. This would be manifest to any one who should attend and try, immediately on arising from sleep, to remember [his dreaming experiences]. There are cases of persons ²⁰ who have seen such dreams, those, for example, who believe themselves to be mentally arranging a given list of subjects according to the mnemonic rule. They frequently find themselves engaged in something else besides the dream, viz. in setting a phantasm which they envisage into its mnemonic position.¹ Hence it is plain that not every 'phantasm' in sleep is a mere dream-image, and that the further thinking which we ²⁵ perform then is due to an exercise of the faculty of opinion.

So much at least is plain on all these points, viz. that the faculty by which, in waking hours, we are subject to illusion when affected by disease, is identical with that which produces illusory effects in sleep. So, even when persons are in excellent health, and know the facts of the case perfectly well, the sun, nevertheless, appears² to them to be only a foot wide. Now, whether the presentative faculty of the soul be identical with, or different from, the faculty of sense- ³⁰ perception, in either case the illusion does not occur without our actually seeing or [otherwise] perceiving something. Even

¹ The word *φάντασμα* here and in ^b 24 is, according to Freudenthal, a generalized 'vorstellung', of the nature of a concept. But as we see from 458^b 18 and 462^a 29 its proper application is to the dream-image. Here that which is *παρὰ τὸ ἐνύπνιον* is not the mere *φάντασμα*, but the activity of thought expressed in *τίθεσθαι εἰς τὸν τόπον φάντασμα*, this clause being in apposition to *ἄλλο τι*, which it explains. In ^b 24, however, *φάντασμα* seems to refer to that activity.

² *δοκεῖ* is here used improperly for the more correct *φαίνεται*. See *de An.* 428^b 1-3 *φαίνεται μὲν ὁ ἥλιος ποδιῶος, πέπεισται δ' εἶναι μείζων τῆς οἰκουμένης*. See also 460^b 18. We cannot suppose Aristotle to be here alluding to the unscientific opinion of those who (like Epicurus and his school afterwards) insisted that the sun is only so large as it seems to the eye. Cf. Kant's reference to the 'persistent illusion' of sense on this point (of the size of the sun or moon).

to see wrongly or to hear wrongly can happen only to one who sees or hears something real, though not exactly what he supposes. But we have assumed that in sleep one neither
 459 a sees, nor hears, nor exercises any sense whatever. Perhaps we may regard it as true that the dreamer sees nothing, yet as false that his faculty of sense-perception is unaffected, the fact being that the sense of seeing and the other senses may possibly be then in a certain way affected, while each of these affections, as duly as when he is awake, gives its impulse in
 5 a certain manner to his [primary] faculty of sense, though not in precisely the same manner¹ as when he is awake. Sometimes, too, opinion says [to dreamers] just as to those who are awake, that the object seen is an illusion; at other times it is inhibited, and becomes a mere follower of the phantasm.

It is plain therefore that this affection, which we name 'dreaming', is no mere exercise of opinion or intelligence,
 10 but yet is not an affection of the faculty of perception in the simple sense.² If it were the latter it would be possible [when asleep] to hear and see in the simple sense.

How then, and in what manner, it takes place, is what we have to examine. Let us assume, what is indeed clear enough, that the affection [of dreaming] pertains to sense-perception as surely as sleep itself does. For sleep does not pertain to one organ in animals and dreaming to another; both pertain to the same organ.

15 But since we have, in our work on the Soul,³ treated of presentation,⁴ and the faculty of presentation is identical

¹ οὐχ . . . ὥσπερ: not directly from the αἰσθητόν, but indirectly or mediately from the residual κίνησις—the αἴσθημα ὑπόλοιπον.

² αἰσθάνεσθαι ἀπλῶς: opp. κατὰ πρόσθεσιν, 'with a difference or qualification.' Dreaming is afterwards shown to be αἰσθάνεσθαι in a secondary sense, or κατὰ συμβεβηκός, i. e. in virtue of the residual κινήσεις left in the organs after αἴσθησις has departed.

³ 427^b 27-429^a 9.

⁴ The word 'imagination', owing to popular and psychological associations, is unfitted to be a rendering of φαντασία here, and 'presentation' is now a recognized term χ re-presentation. For the operation of φαντασία in ordinary αἴσθησις see 460^b 18, where φαίνεται = to have a presentation—a φάντασμα—not a re-presentation. Presentation differs from αἴσθησις (in which it is involved). It is the aspect in which that which αἴσθησις apprehends is put before the mind's eye, so to speak. αἴσθησις takes the εἶδη ἄνευ ὕλης of αἰσθητά, and 'presents' them as

with ¹ that of sense-perception, though the essential notion of a faculty of presentation is different from that of a faculty of sense-perception; and since presentation is the movement set up by a sensory faculty when actually discharging its function, while a dream appears to be a presentation (for a presentation which occurs in sleep—whether simply ² or in ²⁰ some particular way—is what we call a dream): it manifestly follows that dreaming is an activity of the faculty of sense-perception, but belongs to this faculty *qua* presentative.

CHAPTER II

We can best obtain a scientific view of the nature of the dream and the manner in which it originates by regarding it in the light of the circumstances attending sleep. The objects ²⁵ of sense-perception corresponding to each sensory organ produce sense-perception in us, and the affection due to their operation is present in the organs of sense not only when the perceptions are actualized, but even when they have departed.

What happens in these cases may be compared with what happens in the case of projectiles moving in space. For in the case of these the movement continues even when that which set up the movement is no longer in contact [with the ³⁰ things that are moved]. For that which set them in motion moves ³ a certain portion of air, and this, in turn, being moved excites motion in another portion; and so, accordingly, it is in this way that [the bodies], whether in air or in liquids, continue moving, until they ⁴ come to a standstill.

material of thought or opinion. This explains how τὸ εἶναι φανταστικῶ (the essential notion of a faculty of presentation) differs from τὸ εἶναι αἰσθητικῶ. See 449^a 16-20, 454^a 19, 455^a 21, with notes.

¹ i. e. inseparable *numero*, and in concrete existence, from it.

² ἀπλῶς: without specifying particular conditions: τῶν τινά, i. e. in the way defined 462^a 29, where the φάντασμα of the dream is said to be formed ἀπὸ τῆς κινήσεως τῶν αἰσθημάτων: the case to which the dream proper is here restricted.

³ ἐκίνησεν not 'consuetudinal aorist', but referring to the time of κινήσαν. Still it may be rendered as in the text.

⁴ ἕως ἂν στή sc. τὰ φερόμενα. While their movement lasts it is to this cause it is due. The emphasis lies on τοῦτον τὸν τρόπον. The movement lasts until the last thing (portion of air) has come into the place of the first movement—ἕως τῆς ἀρχῆς. See next note but one.

This we must likewise assume to happen in the case of qualitative change¹; for that part which [for example] has been heated by something hot, heats [in turn] the part next to it, and this propagates the affection continuously onwards until the process has come round to its point of origination.² This
 5 must also happen in the organ wherein the exercise of sense-perception takes place, since sense-perception, as realized in actual perceiving, is a mode of qualitative change. This explains why the affection continues in the sensory organs, both in their deeper and in their more superficial parts, not merely while they are actually engaged in perceiving, but even after they have ceased to do so. That they do this, indeed, is obvious in cases where we continue for some time engaged in a particular form of perception, for then, when we shift the scene of our perceptive activity, the previous affection remains; for instance, when we have turned our gaze from sunlight³ into darkness. For the result of this is that one
 10 sees nothing, owing to the motion excited by the light still subsisting in our eyes. Also, when we have looked steadily for a long while at one colour, e. g. at white or green, that to which we next transfer our gaze appears to be of

¹ Not merely, as with projectiles, in change of place.

² *ὥς τῆς ἀρχῆς*. The process of *ἀλλοίωσις* in a material body is like that of *ἀντιπερίσταςις* (see note 457^b 2), which ends when the last thing moved takes the place vacated by the first. This place is *ἡ ἀρχή*: i. e. the place *ὅθεν ἡ κίνησις ἀρχεται*. Something is here supposed to occur in the process of heating analogous to what occurs in the case of the projectile. The heat having been applied (and then withdrawn—this is the meaning), something (corresponding to the displaced part of the air) is displaced by it in *τὸ πλησίον*, which becomes hot, while that which was displaced again retires, and so on (*κατ' ἀνταλλαγὴν τῶν τόπων*, as Simplic. would say) until the process ends where it began. The air in successive parts retires before the stone; what retires before *τὸ θερμόν*? *τὸ ψυχρόν* or *ἡ ψυχρότης*, which for Aristotle was a positive. The conclusion of the process in the case of the stone is a state of rest—the stopping of the stone. What is it in the case of *θέρμανσις* (a word which Bonitz omits in his Index, though it occurs 1067^b 12 *q. v.*)? The answer is—*ἡ θερμότης τοῦ ὅλου*. With this the *κίνησις* (involved in the *ἀλλοίωσις*) ceases: for *ἔστιν οὐχ ἡ θερμότης κίνησις, ἀλλ' ἡ θέρμανσις* (1067^b 12). We cannot look for an exact parallel to all this in the case of *αἰσθησις*, which at most is only *ἀλλοίωσις τῆς*: yet something analogous to *ἀντιπερίσταςις* seems to occur in the *κινήσεις* that, as it were, 'circulate' between the external 'points of sense' (eye, ear, &c.) and the *κύριον*, between which poles the *κινήσεις* and the inhibiting forces (their negatives) move.

³ If we had been gazing at the sun itself we should not 'see nothing', but continue to see the sun, as stated below 459^b 13.

the same colour. Again if, after having looked at the sun or some other brilliant object, we close the eyes, then, if we watch carefully, it appears in a right line with the direction ¹⁵ of vision (whatever this may be), at first in its own colour; then it changes to crimson, next to purple, until it becomes black and disappears. And also when persons turn away from looking at objects in motion, e.g. rivers, and especially those which flow very rapidly, they find that the visual stimulations ¹ still present themselves, for the things really at rest are ²⁰ then seen moving: persons become very deaf after hearing loud noises, and after smelling very strong odours their power of smelling is impaired; and similarly in other cases. These phenomena manifestly take place in the way above described.²

That the sensory organs are acutely sensitive to even a slight qualitative difference [in their objects] is shown by what happens in the case of mirrors; a subject to which, ²⁵ even taking it independently, one might devote close ³ consideration and inquiry. At the same time it becomes plain from them that as the eye [in seeing] is affected [by the object seen], so also it produces á certain effect upon it. 'Speculorum enim admodum nitidorum, si forte mulieres menstruae inspexerint, superficies sanguinea quasi nebula ³⁰ offunditur; et novo quidem speculo haud facile est eiusmodi maculam detergere, veteri autem facilius. Quod fit

¹ καὶ . . . μεταβάλλουσιν. Cf. 460^b 28-32 αἱ κινήσεις αἱ ἀπὸ τῶν . . . γινόμεναι . . . φαίνονται. From this we learn that αἱ here agrees with κινήσεις, and that φαίνονται (which occurs in the clauses just before and after) is to be supplied in the sense of ἔτι φαίνονται. μεταβάλλουσιν here cannot be as Mich. takes it = 'undergo ἀλλοίωσις', persistency of impression after transfer of gaze being the point of the sentence, not μεταβολή on the part of the κινήσεις (as with the colour images just before changing to their complementaries, negatives, &c.). We have had it in this sense of 'transfer' just above ^b 13, where μεταβάλλωμεν serves as aor. subj. of μεταφέρειν ^b 8. The full construction then would be: καὶ αἱ ἀπὸ τῶν κινουμένων δὲ (γινόμεναι κινήσεις ἔτι φαίνονται) μεταβάλλουσιν (τὴν ὄψιν ἀπὸ τῶν κινουμένων) οἷον κτλ. Of course 'δέ copulat, καὶ intendit'. It is a matter of indifference for sense or grammar whether after οἷον we supply αἱ, or μεταβάλλουσι. There is no need to suspect the αἱ as a piece of dittography after καὶ in ^b 18. In 460^b 28 the conclusion of the whole argument is set forth.

² i.e. by the persistence of the qualitative change implied in all perception.

³ It is simplest to take περὶ οὗ καθ' αὐτό with σκέψαιτο ἤν, and understand of course τὴν διάνοιαν (or something equivalent) in the usual way with ἐπιστήσας.

propterea quia visus, ut diximus, non modo patitur quippiam, aere agente, sed etiam facit et agit, id quod debent omnia quae sunt splendida. Visus enim ipse illorum est quae splendida sunt et colorem habent. Oculi igitur, ut consentaneum est, eadem qua quaelibet alia pars corporis ratione
 5 se habent; suapte enim natura sunt venosi,¹ unde fit ut, dum menstrua perturbatione quadam sanguinis et inflammatione profluunt, oculi mulierum, quamvis nos quidem mares, dum intuemur, res fugiat (eadem² enim seminis quae menstruorum natura), mutationem subeant; illis autem motus vicinus aer eum quoque, qui supra speculum continuus diffunditur, aera
 10 nescio qualem reddit, nempe talem qualiscumque iam antea est ipse redditus; hic porro superficiem speculi pariter afficit. Ut enim vestimenta, [sic specula] quo sunt puriora, eo citius sordescunt. Quaecumque enim pura sunt, si maculam acceperint, aperte ostendunt, et purissimum quidque exhibet vel minimas turbationes. Aes vero speculari imprimis, propter levitatem quidem tactum qualemcumque sentit (aëris autem
 15 tactum oportet pro fricatione quadam et quasi expressione vel ablutione haberi); propterea autem quod purum est, manifeste in eo apparet tactus quantuluscumque. Quod vero tarde e novis speculis maculae discedunt, id fit quia speculum eiusmodi leve et purum est; namque per talia in altum et
 20 omnifariam insinuaturs infectus; in altum quidem propterea quod pura sunt, omnifariam autem propter levitatem. Contra in veteribus speculis macula idcirco non residet, quod neque perinde in ea penetrat, et summa tantummodo attingit.'

From this therefore it is plain that stimulatory motion is set up even by slight differences, and that sense-perception is quick to respond to it; and further that the organ which
 25 perceives colour is not only affected by its object, but also

¹ φλεβώδεις ὄντες as if ὀφθαλμοί not ὄμματα had preceded.

² The object of the parenthetic words is to explain not the *ἐνεστι*, but the fact that, although *ἐνεστι*, it escapes *our* notice. This is due to the fact that the *ἀλλοίωσις* required for perception depends on the presence of opposites (cp. *de An.*, where the doctrine *πάσχει τὸ ἀνόμοιον [ὑπὸ τοῦ ἀνομοίου] πεπονθὸς δ' ὁμοίον ἐστίν* is laid down as fundamental). Owing to the identity of *φύσις* here the requisite *ἀνομοιότης* does not exist: hence *ἡ ἐν τοῖς ὄμμασι τῶν γ. ἡμῶν ἄδελος*. This seems plain enough; but the words in the translation have been so collocated as to exhibit it in the clearest light.

reacts upon it. Further evidence to the same point is afforded by what takes place in wines, and in the manufacture of unguents. For both oil, when prepared, and wine become rapidly infected by the odours of the things near them; they not only acquire the odours of the things thrown ³⁰ into or mixed with them, but also those of the things which are placed, or which grow, near the vessels containing them.

In order to answer our original question, let us now, therefore, assume one proposition, which is clear from what ^{460 b} precedes, viz. that even when the external object of perception has departed, the impressions it has made persist, and are themselves objects of perception; and [let us assume], besides, that we are easily deceived respecting the operations of sense-perception when we are excited by emotions,¹ and different persons according to their different emotions; for example, the coward when excited by fear, the amorous ⁵ person by amorous desire; so that, with but little resemblance to go upon, the former thinks he sees his foes approaching, the latter, that he sees the object of his desire; and the more deeply one is under the influence of the emotion, the less similarity is required to give rise to these illusory impressions. Thus too, both in fits of anger, and also in all states of appetite, all men become easily deceived, and more so the more their ¹⁰ emotions are excited. This is the reason too why persons in the delirium of fever sometimes think they see animals on their chamber walls, an illusion arising from the faint resemblance to animals of the markings thereon when put together in patterns; and this sometimes corresponds with the emotional states of the sufferers, in such a way that, if the latter be not very ill, they know well enough that it is an illusion; but if the illness is more severe they actually move ¹⁵ according to the appearances.² The cause of these occur-

¹ ἐν πάθεσιν ὄντες . . . ὁ δειλός, κτλ. The δειλός = the person whose disposition or character inclines him to take fright; the φόβος = the fright he gets into at any particular time. So with ὁ ἐρωτικός and his ἔρως. πάθη here not = 'passions', as this word is generally understood in psychological English. See Höffding (E.T.), p. 282, where 'passion' and 'emotion' are defined. For πάθος ἡ ἔξις, see *N.E.* 1105^b 21-26.

² πρὸς αὐτά: they regulate their movements with a view to them or with relation to them: i.e. move away from them or towards them, as if they were real.

rences is that the faculty in virtue of which the controlling sense judges is not identical with that in virtue of which presentations come before the mind. A proof of this is, that the sun presents itself as only a foot in diameter, though often something¹ else gainsays the presentation. 20 Again, when the fingers are crossed, the one object [placed between them] is felt [by the touch] as two; but yet we deny that it is two; for sight is more authoritative than touch. Yet, if touch stood alone, we should actually have pronounced the one object to be two. The ground of such false judgments is that any appearances whatever present themselves, not only when its object stimulates a sense, but also when the sense by itself alone² is stimulated, 25 provided only it be stimulated in the same manner³ as it is by the object. For example, to persons sailing past the land seems to move,⁴ when it is really the eye that is being moved by something else [the moving ship].

CHAPTER III

From this it is manifest that the stimulatory movements based upon sensory impressions, whether the latter are derived from external objects or from causes within the body, present themselves⁵ not only when persons are awake, but also then, when

¹ As some senses are more authoritative than others, so τὸ κρίνον is more authoritative than τὸ φανταστικόν, and even than any particular sense. The judgment, which recognizes the superior authority of sight and makes us say (φαμέν) that the objects are *not* two, but one, is what Aristotle here wishes to emphasize.

² Without an object.

³ The importance of this in explaining the illusion of dreams appears fully in 461^b 28-9.

⁴ κινεῖσθαι, κινουμένης are here both used of local movement, while κινούντος, κινουμένης, just above were used of sense-stimulation.

⁵ Biehl's text has been translated. ἐγγηγορότων: we have a gen. absol. (not a dative after φαίνονται) because when awake people do not notice them, although they are there. The εἶσιν supplied by Mich. in first clause is not necessary. ^b 29 τῶν αἰσθημάτων: the impressions of sense as distinct from the exercises of sense--αἰσθήσεις. τῶν θύραθεν . . . τῶν ἐκ τοῦ σ. impressions derived from objects in space around us X impressions of our bodily states, e.g. twinges of pain, &c. αἰσθημάτων agrees with τῶν καὶ τῶν. Ἐνυπαρχουσῶν in Biehl's text must be wrong, for we cannot believe in his anacoluthia. The case is not like φλεβώδεις ὄντες, 460^a 5; for there, at least, there is a new sentence, and the subject is grammatically different. Put we cannot part with αἰσθημάτων here: αἰσθήσεων would contradict 459^a 27 ἀπελθουσῶν and 460^b 2 (ἀπελθόντων);

this affection which is called sleep has come upon them, with even greater¹ impressiveness. For by day, while the senses and the intellect are working together,² they (i. e. such movements) are extruded from consciousness or obscured, just as 461a a smaller is beside a larger fire, or as small beside great pains or pleasures, though, as soon as the latter have ceased, even those which are trifling emerge into notice. But by night [i. e. in sleep] owing to the inaction of the particular senses, and their powerlessness to realize themselves, which arises from the reflux of the hot from the exterior parts to the 5 interior, they [i. e. the above 'movements'] are borne in³ to the head quarters of sense-perception, and there display themselves as the disturbance (of waking life) subsides. We must suppose that, like the little eddies which are being ever formed in rivers, so the sensory movements are each a continuous process, often remaining like what they were when first 10 started, but often, too, broken into other forms by collisions with obstacles. This [last mentioned point], moreover, gives the reason why no dreams occur in sleep immediately after meals, or to sleepers who are extremely young, e. g., to infants. The internal movement in such cases is excessive, owing to the heat generated from the food. Hence, just as in a liquid, if one vehemently disturbs it, sometimes no reflected image 15 appears, while at other times one appears, indeed, but utterly the doctrine being that dreams are based ἀπὸ τῶν αἰσθημάτων or ἀπὸ τῶν κινήσεων τῶν αἰσθημάτων, the αἰσθήσεις of which have departed. Cf. 461^a 19 and 462^a 30. We should, therefore (in spite of MSS.), read ἐνυπάρχουσιν, with Bywater, *J. P.* xxviii. 243, 461^b 30. Besides it is emphatically not the αἰσθήσεις but their κινήσεις or αἰσθήματα that abide within: cf. 459^a οὐ μόνον ἐνυπάρχει ἐν τοῖς αἰσθητήριοις ἐνεργουσῶν τῶν αἰσθήσεων, ἀλλὰ καὶ ἀπελθουσῶν. Keeping Biehl's text, however, φαίνονται 460^b 32 goes with the preceding clause also, even without zeugma: for the κινήσεις can be said φαίνεσθαι ἐγγρηγορότων = to 'present themselves' when people are awake, though they do not φαίνονται ἐγγρηγορόσιν, i. e. appear to or get noticed by them.

¹ καὶ μάλλον. The trans. 'even more' has the advantage of requiring φαίνονται to be supplied but once, viz. in the οὐ μόνον clause. We get a perfectly good construction by making καί the copula, but then must supply φαίνονται twice. Besides καὶ μάλλον = *vel magis* is a stock expression.

² Συνεργουσῶν should be ἐνεργουσῶν of which it is an attempted correction in EMY; (1) it perverts Aristotle's meaning, as the co-operation of αἰσθ. and διάνοια is not necessary for the extrusion of the κινήσεις; (2) Aristotle nowhere else uses συνεργεῖν absolutely, nor can we supply here ταῖς κινήσεσιν; (3) cf. 461^a 5, *alibi*, where ἐνεργεῖν is used *de re eadem*.

³ καταφέρονται, borne in (to the κύριον αἰσθ.) from τὰ αἰσθητήρια, in which ἐνυπάρχουσιν.

distorted, so as to seem quite unlike its original ; while, when once the motion has ceased, the reflected images are clear and plain ; in the same manner during sleep the phantasms, or residuary movements, which are based upon the sensory impressions, become sometimes quite obliterated by the
 20 above described motion when too violent ; while at other times the sights are indeed seen, but confused and weird, and the dreams [which then appear] are unhealthy, like those of persons who are atrabilious, or feverish, or intoxicated with wine. For all such affections, being spirituous, cause much commotion and disturbance. In sanguineous animals, in pro-
 25 portion as the blood becomes calm, and as its purer are separated from its less pure elements, the fact that the movement, based on impressions derived from each of the organs of sense, is preserved in its integrity, renders the dreams healthy, causes a [clear] image to present itself, and makes the dreamer think, owing to the effects borne in from the organ of sight, that he actually sees, and owing to those which come from the organ of hearing, that he really
 30 hears ; and so on with those also which proceed from the other sensory organs. For it is owing to the fact that the movement which reaches the primary organ of sense comes from them, that one even when awake believes him-
 461 b self to see, or hear, or otherwise perceive ; just as it is from a belief that the organ of sight is being stimulated,¹ though in reality not so stimulated, that we sometimes erroneously declare ourselves to see, or that, from the fact that touch announces two movements, we think that the one object is two. For, as a rule, the governing sense affirms the report of each particular sense, unless another particular sense, more
 5 authoritative, makes a contradictory report. In every case an appearance presents itself, but what appears does not in every case seem real, unless when the deciding faculty is inhibited, or does not move with its proper motion. Moreover, as we said that different men are subject to illusions, each according to the different emotion present in him, so it is that the sleeper, owing to sleep, and to the movements then going on in his sensory organs, as well as to the other facts

¹ By objective visual impressions.

of the sensory process, [is liable to illusion], so that the ¹⁰ dream presentation, though but little like it, appears as some actual given thing. For when one is asleep, in proportion as most of the blood sinks inwards to its fountain [the heart], the internal [sensory] movements, some potential, others actual¹ accompany it inwards. They are so related [in general] that, if anything move the blood, some one sensory movement will emerge from it, while if this perishes another will take its place; while to one another also they ¹⁵ are related in the same way as the artificial frogs in water which severally rise [in fixed succession] to the surface in the order in which the salt [which keeps them down] becomes dissolved. The residuary movements are like these: they are within the soul potentially, but actualize themselves only when the impediment to their doing so has been relaxed; and according as² they are thus set free, they begin to move in the blood which remains in the sensory organs, and which is now but scanty,³ while they possess verisimilitude after the manner of cloud-shapes, which in their rapid metamorphoses ²⁰ one compares now to human beings and a moment afterwards to centaurs. Each of them is however, as has been said, the remnant of a sensory impression taken when sense was actualizing itself; and when this, the true impression,⁴ has departed, its remnant is still immanent, and it is correct to say of it, that though not actually Koriskos, it is like Koriskos. For⁵ when the person was actually perceiving, his controlling ²⁵

¹ The 'actual' are those in consciousness at the time when one is falling asleep: the potential, those which had before that subsided into latency. Cf. 461^a 1.

² *λυόμεναι*: i. e. successively and severally: pres. part. has its force (all through these tracts such points are most carefully observed).

³ The most favourable condition, disturbance being at its minimum.

⁴ *τοῦ αἰσθήματος τοῦ ἀληθοῦς* has here and in what follows to be carefully distinguished from *τὸ αἰσθημα* = the impression merely, when the *αἰσθητόν* is gone.

⁵ Mich. explains *δέ* as = *γάρ*, rightly; for the *ὁμοιότης* of the *ὑπόλειμμα* is derived from that of the *ἀληθές αἰσθημα*. But he is wrong when he makes *ὅτε ἡσθάνετο* = *ὅτε ἐν τῷ ὕπνῳ οὐ κατείχετο ὑπὸ τοῦ αἵματος*. The past tense might have warned him against doing so. Both this and the *ἀν μὴ παντελῶς* refer to what happens in waking and normal consciousness. The detection of a dream as such in sleep is mentioned below (462^a 3) as an exceptional occurrence, and not part of the dream proper; to introduce it here would only confuse, not illustrate

and judging sensory faculty did not call it¹ Koriskos, but, prompted by this [impression], called the genuine person yonder Koriskos. Accordingly, this sensory impulse, which, when actually perceiving, it [the controlling faculty] so describes (unless completely inhibited by the blood), it now [in dreams], when quasi-perceiving,² receives from the movements persisting in the sense-organs, and mistakes it — an impulse that is merely like the true³ [objective] impression — for the true impression itself, while the effect³⁰ of sleep is so great that it causes this mistake to pass unnoticed. Accordingly, just as if a finger be inserted beneath the eyeball without being observed, one object will

as Aristotle means to do. Mich. is right, however, in making οὐ δὴ . . . αἵματος δηλωτικὸν τοῦ ὅτε δὲ ἡσθάνετο. Biehl, in stating that Mich. read μή after ὥσπερ, ^b27, makes a mistake. Wendland's (Mich., p. 73. 12) note is 'ὥσπερ cum Arist. EMSUY (ὥσπερ μή L).' See next note but one.

¹ The impression synchronous with actual perception.

² ὥσπερ αἰσθανόμενον. In the translation the text of Biehl has not been followed. The retention (with Biehl, after L) of μή after ὥσπερ ^b27, or its omission (with Mich. and EMYSU), makes a great difference. It ought to be omitted: ὥσπερ αἰσθανόμενον is in sense opposed to καὶ αἰσθανόμενον ^b26, and to ὅτε ἡσθάνετο ^b24, as the dreaming to the waking consciousness. When one was actually percipient, the κύριον did not confound even τὸ αἶσθημα τὸ ἀληθές with Κορίσκος ὁ ἀληθινός, nor does it when actually percipient ever do so unless under some pathological condition; yet (see 460 ^b25) in the quasi-percipient state of sleep, when not perceiving τὸ αἶσθημα τὸ ἀληθές at all, but only its ὑπόλειμμα, it is moved with this same movement (τοῦτο κινείται, cf. 463 ^b18), and made to treat this (the ὑπόλειμμα) not only as if it were τὸ ἀληθές αἶσθημα, but as if it were a real thing. After αἰσθητηρίοις ^b29 there should be only a comma. The waking αἶσθημα is only οἶον Κορίσκος, not actually K. The remanent αἶσθημα too is, but only in a secondary degree, οἶον K. Yet so great is the power of sleep that the critical faculty, which in waking moments (unless inhibited completely) does not mistake even the genuine αἶσθημα for its object, when asleep confounds distinctions, and mistaking the remanent αἶσθημα for the object, is unaware of this mistake.

³ ^b29, αὐτῷ with ὅμοιον. ἀληθές here and above is to be kept distinct from ἀληθινός, as 'truthful' from 'genuine', according to the usual meanings of these words. ὁ ἀληθινός K. = the genuine Koriskos: τὸ ἀληθές αἶσθημα = the impression which tells truth, i.e. the immediate impression of K. yonder, as distinct from the ὑπόλειμμα, which speaks of him as if there when he is not there. Hence it is that ἀληθές and αὐτῷ should not be referred to the external thing. Two degrees of error (whence the strong expression τοσαύτη ἡ δύναμις) are usual in dreams: (a) the αἶσθημα τὸ ὑπόλοιπον is confounded with τὸ αἶσθημα τὸ ἀληθές; (b) no distinction is drawn between τὸ αἶσθημα τὸ ἀληθές and τὸ πρᾶγμα τὸ ἀληθινόν. This fine analysis is (or may have been) founded on Plato, *Republic*, 476 c τὸ ὀνειρώττειν ἄρα οὐ τόδε ἐστίν, ἐάν τε ἐν ὕπνῳ τις ἐάν τ' ἐγρηγορώς τὸ ὅμοιον τῷ μὴ ὅμοιον ἀλλ' αὐτὸ ἡγῆται εἶναι ὃ ἕοικεν;

not only present two visual images, but will create an opinion of its being two objects ; while if it [the finger] be observed, the presentation will be the same, but the same opinion will not be formed of it ; exactly so it is in states of sleep : if the sleeper perceives that he is asleep, and is conscious of the sleeping state during which the perception comes before his mind, it presents itself still, but something within him ⁵ speaks to this effect : ' the image of Koriskos presents itself, but the real Koriskos is not present ' ; for often, when one is asleep, there is something in consciousness which declares that what then presents itself is but a dream. If, however, he is not aware of being asleep, there is nothing which will contradict the testimony of the bare presentation.

That what we here urge is true, i. e. that there are such presentative movements in the sensory organs, any one may convince himself, if he attends to and tries to remember the ¹⁰ affections we experience when sinking into slumber or when being awakened. He will sometimes, in the moment of awakening, surprise the images which present themselves to him in sleep, and find that they are really but movements lurking in the organs of sense. And indeed some very young persons, if it is dark, though looking with wide open eyes,¹ see multitudes of phantom figures moving before them, so that they often cover up their heads in terror.

From all this, then, the conclusion to be drawn is, that the ¹⁵ dream is a sort of presentation, and, more particularly, one which occurs in sleep ; since the phantoms just mentioned are not dreams, nor is any other a dream which presents itself when the sense-perceptions are in a state of freedom. Nor is every presentation which occurs in sleep necessarily a dream. For in the first place, some persons [when asleep] actually, in a certain way, perceive sounds, light, savour, and ²⁰ contact ; feebly, however, and, as it were, remotely. For there have been cases in which persons while asleep, but with the eyes partly open, saw faintly in their sleep (as they supposed) the light of a lamp, and afterwards, on being awakened, straightway recognized it as the actual light of a real lamp ; while, in other cases, persons who faintly heard

¹ διαβλέποντες χ ὑποβλέποντες, 462^a 22.

25 the crowing of cocks or the barking of dogs identified these clearly with the real sounds as soon as they awoke. Some persons, too, return answers to questions put to them in sleep. For it is quite possible that, of waking or sleeping, while the one is present in the ordinary sense, the other also should be present in a certain way. But none of these occurrences¹ should be called a dream. Nor should the true thoughts,² as distinct from the mere presentations, which occur in sleep [be called dreams]. The dream proper is a presentation based
 30 on the movement of sense impressions, when such presentation occurs during sleep, taking sleep in the strict sense of the term.

There are cases of persons who in their whole lives have
 462 b never had a dream, while others dream when considerably advanced in years, having never dreamed before. The cause of their not having dreams appears somewhat like that which operates in the case of infants, and [that which operates] immediately after meals. It is intelligible enough that no
 5 dream-presentation should occur to persons whose natural constitution is such that in them copious evaporation is borne upwards, which,³ when borne back downwards, causes a large quantity of motion. But it is not surprising that, as age advances, a dream should at length appear to them. Indeed,
 10 it is inevitable that, as a change is wrought⁴ in them in proportion to age or emotional experience, this reversal [from non-dreaming to dreaming] should occur also.

¹ Those due to this ambiguous condition.

² ἀληθείς ἐννοίαι: e.g. when one says to himself 'this is only a dream'. Cf. *supra* 462^a 6.

³ Reading ἡ . . . καταφερομένη ποιεῖ with ISU and Themistius. Biehl's text is wrong, for it implies that the *upward* movement of the ἀναθυμίασις causes sleep. Cf. *supra* 456^b 26-8.

⁴ If we keep γινομένης (which suits καθ' ἡλικίαν) we must give it its continuative or progressive sense. This progressive change keeps pace with their change of age, and with the succession of (or vicissitudes of) πάθη which they experience. κατὰ πάθος does not mean 'in consequence of something that has happened to them', or in consequence of some *one* emotion.

CHAPTER I

AS to the divination which takes place in sleep, and is said to be based on dreams, we cannot lightly either dismiss it with contempt or give it implicit confidence. The fact that all persons, or many, suppose dreams to possess a special significance, tends to inspire us with belief in it [such divination], as founded ¹⁵ on the testimony of experience; and indeed that divination in dreams should, as regards some subjects, be genuine, is not incredible, for it has a show of reason; from which one might form a like opinion also respecting all other dreams. Yet the fact of our seeing no probable cause to account for such divination tends to inspire us with distrust. For, in addition to ²⁰ its further unreasonableness, it is absurd to combine¹ the idea that the sender of such dreams should be God with the fact that those to whom he sends them are not the best and wisest, but merely commonplace persons. If, however, we abstract from the causality of God, none of the other causes assigned appears probable. For that certain persons should have foresight in dreams concerning things destined to take place at the Pillars of Hercules, or on the banks of the Borysthenes, seems ²⁵ to be something to discover the explanation of which surpasses the wit of man. Well then, the dreams in question must be regarded either as *causes*, or as *tokens*, of the events, or else as *coincidences*; either as all, or some, of these, or as one only. I use the word 'cause' in the sense in which the moon is

¹ b 20-22. Biehl's comma after *πέμποντα* is wrong, unless another comma be put after *ἀλογία*. The clause *πρὸς τῇ ἄλλῃ ἀλογίᾳ*, which is parenthetical, refers to the 'abandonment of reason' already noticed in *μηθεμίαν αἰτίαν εὐλογον* just before. Besides the general *ἀλογία* of referring dreams to *ὁ θεός*, there is the special *ἀτοπία* of his sending them to poor creatures, not to wise men (cf. 463^b 15). The constr. is: *τό τε . . . εἶναι καὶ τὸ . . . πέμπειν*; it is the conjunction of the two things that is peculiarly *ἀτοπον*. Thus *τε* and *καί* are in their usual correlation here.

[the cause] of an eclipse of the sun, or in which fatigue is
 30 [a cause] of fever; 'token' [in the sense in which] the entrance
 of a ¹ star [into the shadow] is a token of the eclipse, or [in
 which] roughness of the tongue [is a token] of fever; while
 by 'coincidence' I mean, for example, the occurrence of an
 eclipse of the sun while some one is taking a walk; for the
 463 a walking is neither a token nor a cause of the eclipse, nor
 the eclipse [a cause or token] of the walking. For this
 reason no coincidence takes place according to a universal
 or general rule. Are we then to say that some dreams
 are causes, others tokens, e.g. of events taking place in the
 bodily organism? At all events, even scientific physicians tell
 5 us that one should pay diligent attention to dreams, and to
 hold this view is reasonable also for those who are not
 practitioners, but speculative philosophers. For the move-
 ments which occur in the daytime [within the body] are,
 unless very great and violent, lost sight of in contrast with the
 10 waking movements, which are more impressive. In sleep the
 opposite takes place, for then even trifling movements seem
 considerable. This is plain in what often happens during sleep;
 for example, dreamers fancy that they are affected by thunder
 and lightning, when in fact there are only faint ringings in their
 ears; or that they are enjoying honey or other sweet savours,
 when only a tiny drop of phlegm is flowing down [the
 15 oesophagus]; or that they are walking through fire, and
 feeling intense heat, when there is only a slight warmth
 affecting certain parts of the body. When they are awakened,
 these things appear to them in this their true character.
 But since the beginnings of all events are small, so, it is
 clear, are those also of the diseases or other affections about
 20 to occur in our bodies. In conclusion, it is manifest that these
 beginnings must be more evident in sleeping than in waking
 moments.

Nay, indeed, it is not improbable that some of the presenta-
 tions which come before the mind in sleep may even be

¹ τὸν ἀστέρα = 'a star or any star': the star that *does* show out, whatever
 star it be. The article is generic. The εἰς- not = 'into our view' but =
 'into the shadow,' when however, of course, it also comes into our view.
 Bonitz, *Ind.*, queries εἰσελθεῖν here: why? The first star we see
 betokens the coming eclipse.

causes of the actions cognate to each of them. For as when we are about to act [in waking hours], or are engaged in any course of action, or have already performed certain actions, we often find ourselves concerned with these actions, or per-²⁵ forming them, in a vivid dream; the cause whereof is that the dream-movement has had a way paved for it from the original movements set up in the daytime; exactly so, but conversely, it must happen that the movements set up first in sleep should also prove to be starting-points of actions to be performed in the daytime, since the recurrence by day of the thought of these actions also has had its way paved for it in the images before the mind at night. Thus then it is³⁰ quite conceivable that some dreams may be tokens and causes [of future events].

Most [so-called prophetic] dreams are, however, to be classed as mere coincidences, especially all such as are ex-^{463 b} travagant, and those in the fulfilment of which the dreamers have no initiative, such as in the case of a sea-fight, or of things taking place far away. As regards these it is natural that the fact should stand as it does whenever a person, on mentioning something, finds the very thing mentioned come to pass. Why,⁵ indeed, should this not happen also in sleep? The probability is, rather, that many such things should happen. As, then, one's mentioning a particular person is neither token nor cause of this person's presenting himself, so, in the parallel instance, the dream is, to him who has seen it, neither token nor cause of its [so-called] fulfilment, but a mere coincidence. Hence the fact that many dreams have no 'fulfilment', for coincidences do not occur according to any universal or¹⁰ general law.

CHAPTER II

On the whole, forasmuch as certain of the lower animals also dream, it may be concluded that dreams are not sent by God, nor are they designed for this purpose [to reveal the future]. They have a divine aspect,¹ however, for Nature [their cause]

¹ δαιμόνια μέντοι, ἡ γὰρ φύσις δαιμονία, ἀλλ' οὐ θεία. Bonitz (*Ind.* 464^a 28) followed by L. and S. (*sub voc.* δαιμόνιος) explains φύσις here as ἡ τῶν ἄλλων ζώων φύσις. Zeller, *Arist.* i. 421 (E. T.) takes the right view.

¹⁵ is divinely planned, though not itself divine. A special proof [of their not being sent by God] is this: the power of foreseeing the future and of having vivid dreams is found in persons of inferior type, which implies that God does not send their dreams; but merely that all those whose physical temperament is, as it were, garrulous and excitable, see sights of all descriptions; for, inasmuch as they experience many movements of every kind, they just chance to have visions resembling objective facts, their luck in these matters
²⁰ being merely like that of persons who play at even and odd.¹ For the principle which is expressed in the gambler's maxim: 'If you make many throws your luck must change,' holds good in their case also.

That many dreams have no fulfilment is not strange, for it is so too with many bodily symptoms and weather-signs,
²⁵ e. g., those of rain or wind. For if another movement occurs more influential than that from which, while [the event to which it pointed was] still future, the given token was derived, the event [to which such token pointed] does not take place. So, of the things which ought to be accomplished by human agency, many, though well-planned, are by the operation of other principles more powerful [than man's agency] brought to nought. For, speaking generally, that which *was* about to happen is not in every case what now *is happening*; nor is that which *shall* hereafter *be* identical with that which *is* now *going to be*.
³⁰ Still, however, we must hold that the beginnings from which, as we said,² no consummation follows, are *real* beginnings, and these constitute natural tokens of certain events, even though the events do not come to pass.

As for [prophetic] dreams which involve not such beginnings [sc. of future events] as we have here described, but such as are extravagant in times, or places, or magnitudes; or those

If φύσις were to be thus limited we should have had αὐτῶν. Nature in general is δαίμονια as the province and theatre of God's final causation, and dreams (which are φυσικά) partake of the character of Nature their cause. The general difference between θεός and δαίμων, θεός and δαιμόνιον, (that the δαίμων is the offspring of the θεός, the δαιμόνιον the handiwork of the θεῖον) is here preserved.

¹ Reading ἀρτιάζοντες, Bekker's conj.

² οὐκ ἐτελέσθη: such is the force of the aor. For meaning of τινάς cf. notes 440^a 28.

involving beginnings which are not extravagant in any of these respects,¹ while yet the persons who see the dream hold not in their own hands the beginnings [of the event to which it points]: unless the foresight which such dreams give is the result of pure coincidence, the following would be a better explanation of it than that proposed by Democritus, who alleges 'images' and 'emanations' as its cause. As, when something has caused motion in water or air, this [the portion moved] moves another [portion of water or air], and, though the cause has ceased to operate, such motion propagates itself to a certain point, though there the prime movent is not present; just so it may well be that a movement and a consequent sense-perception should reach sleeping souls from the objects from which 10 Democritus represents 'images' and 'emanations' as coming; that such movements, in whatever way they arrive, should be more perceptible at night [than by day], because when proceeding thus in the daytime they are more liable to dissolution (since at night the air is less disturbed, there being then less wind); and that they shall be perceived within the body 15 owing to sleep, since persons are more sensitive even to slight sensory movements when asleep than when awake. It is these movements then that cause 'presentations', as a result of which sleepers foresee the future even relatively to such events as those referred² to above. These considerations also explain why this experience befalls commonplace persons 20 and not the most intelligent. For it would have regularly occurred both in the daytime and to the wise had it been God who sent it; but, as we have explained the matter, it is quite natural that commonplace persons should be those who have foresight [in dreams]. For the mind of such persons is not given to thinking, but, as it were, derelict, or totally vacant, and, when once set moving, is borne passively on in the direction taken by that which moves it. With regard to the fact that some persons who are liable to derangement have this 25

¹ * 2. ἡ τούτων μὲν μηδέν: sc. ὑπερορίας τὰς ἀρχὰς ἔχόντων τῶν ἐνυπνίων. Μηδέν is acc. of respect after ὑπερορίας understood from the previous clause. Perhaps μηδενί would have been plainer; but the construction is easy enough. Biehl by his proposed correction αὐτοῖς . . . τοῖς ἰδοῦσι would seem to construe as if μηδέν depended on ἔχόντων directly.

² i. e. those referred to 464^a 1-4.

foresight, its explanation is that their normal mental movements do not impede [the alien movements], but are beaten off by the latter. Therefore it is that they have an especially keen perception of the alien movements.

That certain persons in particular should have vivid dreams, e.g. that familiar friends should thus have foresight in a special degree respecting one another, is due to the fact that such friends are most solicitous on one another's behalf.

30 For as acquaintances in particular recognize and perceive one another a long way off, so also they do as regards the sensory movements respecting one another ; for sensory movements which refer to persons familiarly known are themselves more familiar. Atrabilious persons, owing to their impetuosity,¹ are, when they, as it were, shoot from a distance, expert at hitting ;

464 b while, owing to their mutability, the series of movements deploys quickly before their minds. For even as the insane recite, or con over in thought, the poems of Philaegides,² e.g. the Aphrodite, whose parts succeed in order of similitude, just so do they [the 'atrabilious'] go on and on stringing sensory movements together. Moreover, owing to their aforesaid

5 impetuosity, one movement within them is not liable to be knocked out of its course by some other movement.

The most skilful interpreter of dreams is he who has the faculty of observing resemblances. Any one may interpret dreams which are vivid and plain. But, speaking of 'resemblances', I mean that dream presentations are analogous to the forms reflected in water, as indeed we have already stated.

10 In the latter case, if the motion in the water be great, the reflexion has no resemblance to its original, nor do the forms resemble the real objects. Skilful, indeed, would he be in interpreting such reflexions who could rapidly discern, and at a glance comprehend, the scattered and distorted fragments

¹ Which do not suffer them to wait until the object of their speculation is near them.

² Probably should be Φιλαιγίδος, a name found in Lucian, *Pseudologista*, § 24, and Athenaeus 335 B-E. But what were the poems referred to? Did they go on like 'The House that Jack built'? Ath. and Luc. do not help to explain the point here, and Mich. and Pseudo-Them. add nothing to what our passage yields. Michael only contrasts the desultory manner of Euripides with the consistency of Philaegides in keeping to a theme.

of such forms, so as to perceive that one of them represents a man, or a horse, or anything whatever. Accordingly, in the 15 other case also, in a similar way, some such thing as this [blurred image] is all that a dream amounts¹ to; for the internal movement effaces the clearness of the dream.

The questions, therefore, which we proposed as to the nature of sleep and the dream, and the cause to which each of them is due, and also as to divination as a result of dreams, in every form of it, have now been discussed.

¹ b 15. The *troubled* dream 'has this effect', δύναται τοῦτο. The κακεῖ prevents us from taking τοῦτο with τὸ ἐνύπνιον = 'the dream we speak of has a certain effect.' To explain τι it is necessary, after Biehl's conjecture, to read τοιοῦτο. There is no analogy for τοῦτό τι : τόδε τι is a totally different kind of expression. But τοιοῦτό τι would be not only correct, but quite to the point here. Not τι, but πως, should qualify ὁμοίως.

OXFORD
PRINTED AT THE CLARENDON PRESS
BY HORACE HART, M.A.
PRINTER TO THE UNIVERSITY